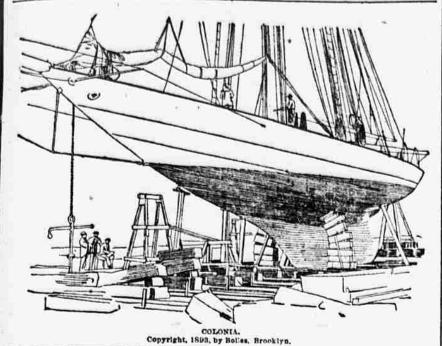
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Great Racers of To-day-Description of the Grandest Marine Quartet Ever Seen -Dimensions, Sail Plan, Modele and Ideas Below and Above the Water Line-What They Have Done and What They May be Expected to Do-Measurements. The four boats which will compete to-day in the first trial race for the honor of defending the America Cup against the coming Val-

done for the purpose of increasing the stability and at the same time to form a lock to prevent the water passing under the keel. This, it is expected, will allow the boat to fetch nearer where she points, as she has shown quite a tondeavy to go bodily to leeward. The above-water tody of the boat appears very high sided, the freeboard being much greater than previous practice in large boats. The bow, when the boat is keeled presents rather an abrupt entrance. The quarters have the usual Herreshoff fulness. The boat aloft looks extremely well. Hersails appear fairly good, the rigging is neat, and her spars stand splendidly.

The Nort boat to be laid down was the Vigilant. This boat was ordered from the Herreshoffs by the Morgan-Isolin syndicate in order that the defence of the Cup should not depend solely on one boat. This boat from the beginning has been in the hands of Mr Oliver Isolin. Whether Mr. Isolin had anything to do with the design or not it is impossible to say, but many of the features and characteristics of the boat resemble very closely the Titania. THE VIOLLANT. kyrie, while embodying all jthat is most modera in yacht building, plainly show that there



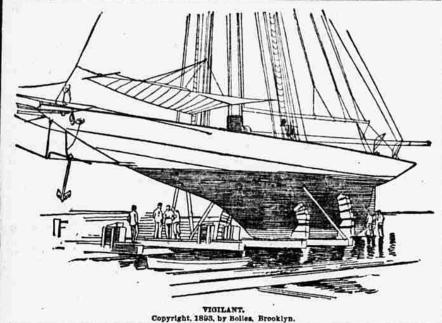
is a wide difference of opinion among yacht lesigners as to the proper form of hull, weight and distribution of lead. and amount of sail to be carried in order to attain the highest speed with a sailing yacht. Probably never in the history of American yachting have four boats competed in a race upon which so much talent, money, and patient thought have been expended.

THE COLONIA. Mr. Archibald Rogers and the gentlemen associated with him were the first in the field to order a cup defender. They gave the Herreshoffs an order to build them the fastest boat they could turn out. The latter were restrict-

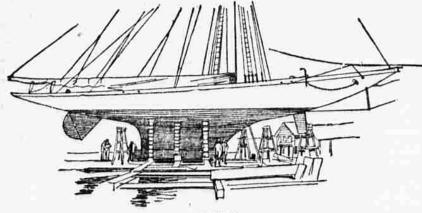
with which Mr. Iselin was so very successful

with which Mr. Iselin was so very successful some years ago.

The Vigilant's length over all is 124 feet, water line 81 feet if inches, heam 23 feet, draught 14 feet, displacement about 140 tons. In the sheer outline she resembles the Colonia, her bow, water line, &c., being similar. Her midship section resembles very closely the Titania. The boat is widest at the deck, from where it sweeps down easily about a foot above the water line, where it turns more quickly, showing a very faint blige. It runs almost in a straight line for some distance, then curves gently into the garboards; from here down it drops in a straight line to the Keel. The boat on the ways gives the impression of a craft with an easy liling, shoal body, small displacement for dimensions, and a great depth of keel appearing below the hull. Like the Colonia, she

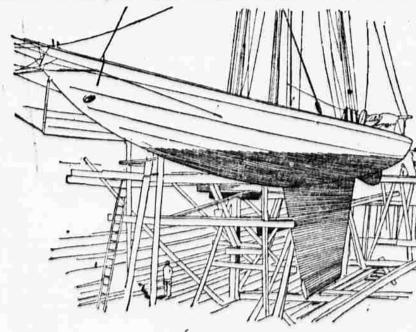


ed in no way, and were at liberty to build anything they pleased. The Colonia may, in consequence, be considered to represent their ideas in every respect. She is a keel sloop 123 feet over all, 85 feet 8 inches on the water line, 24 feet 6 inches on the water line, 24 feet 6 inches beam, and 15 feet draught. Her displacement is about 155 tons. She has been termed an enlarged Wasp, and there is no doubt that the Horreshoffs have, in consequence of the success of that boat, followed her very closely. The most noticeable differences are in the shortness of the ends of



JUBILEE

the Colonia and the reduction of the body below water. The Wasp runs with an easy sweep from the stern to the point where the line reverses to go down to the keel. In the Colonia the line turns rather quickly about three feet below the water, and then goes on with about the same sweep as before. The water line at both ends is finer than the Wasp, water line at both ends is finer than the Wasp, but it still retains the Herreshoff fulness.

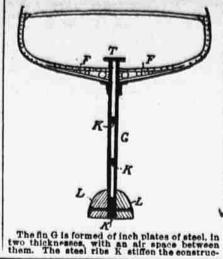


PILGRIM. Copyright, 1893, by Bolles, Brooklyn.

The lines appear to be full at the bow. The run is very clean under water aft. The midship section starts with an easy sweep from the deck to the bilge, which is rather elack. The line continues with a slight curve to the garboards; it then reverses and takes an easy curve. running into a straight line that drops perpendicularly to the keel plate. Most of the lead is bolted on the outside, and is of bulb form. During the last tew days the sides of the keel have been nadded with the load taken from the inside. This has been that an enlarged Titania would the reason that an enlarged Titania would

come out about the same with the exception | merely to show its construction and the meth-of the draught, the Vigilant being deeper in | od of attaching it to the hull:

The Jubilee, the third of the quartet, was designed by John Paine with the assistance of Gen. Paine who, through his experience in defending the cup for three successive times, was well fitted to sot as an adviser. A photograph taken while the boat was hauled out gives a very good idea of her form. The Jubilee is 127 feet over all, 85 feet on load water line, 22 feet to inches beam, and 13 feet 9 inches draught (in included), with about 120 tons displacement. The sheer outline shows a bow snubbed at the outer end. About half way down it starts with an easy aweep which continues throughout the whole length of the boat. About five feet aft of the rudder post it takes an increased curve rounding up to the end of the counter. Bhe buttock lines for about one-fourth the beam from the middle follow this line very closely. The bilge is very decided and is carried well fore and aft, the bottom amidships being nearly flat. The water line forward is very full, while the sections are nearly plumb above water with a U form below. Aft the huttock lines are very fine; while the water lines are very full at the extreme end. In this boat ne attempt has been made to use the water lines as every well halanced. Above water the boat is not as handsome as she is below, but this, of course, does not affect

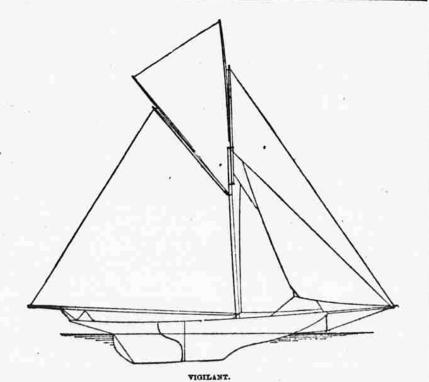




her speed. He only criticism that might be made is that she is a little too high-sided, and is especially so in the ends. Her fin is a very substantial affair. It is perfectly safe in any weather. The lead is bolted to the sides. Through the fin, which is in two parts, the centrelocard is dropped. Forward there is a small board, and aft a skeag, to assist in steering. This boat, from a naval architect's point of view, shows more thought and careful calculation than any of the others. Almost every feature of the boat shows that consideration had been given to it. This craft has remarkable stability for her dimensions. She is inside the others in every dimensions. She is inside the others in every dimension, and still she carries her enormous sail plan as well as any of the quartet. The rigging and blocks are very nest. Aloft she looks

tion and also hold the plates apart and are themselves held by rivets passing through both plates. The main point in building a fin in this way is to have the plates fit each other perfectly at the edges, so that when in a seaway there can be no working or grinding of those edges together, and consequent weakening of the structure. The critical point in Fligrim's construction of course is where the fin joins the bull.

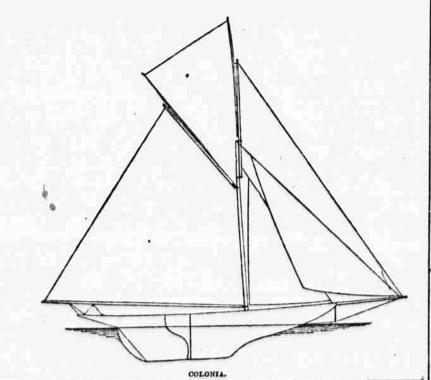
The construction of the hull is that usually employed in steel vessels. Frames called angle from are bent and bevelled to the form of the boat. These are all fastened to the keel before the skin plating is put on. After the hull is in frame every other streak of plating is put on, and the intermediate or outside streaks of plates lapped over



light, but everything stands well. Her s ils are wretched affairs. It is a great pity this boat was not out earlier, as she needs tuning hadly. It was the intention when her construction was decided on to plate her with Tobin bronze, but since the plates of the Vigilant were all to be delivered before another order could be filled, Mr. Paine decided that there would not be time to get the material and complete the boat.

THE FILGHM.

The fourth boat to be ordered was the Pilgrim. This craft has been built for a Boston syndicate, very few of whose names have been made known. The Pilgrim is 120 feet over all, 85 feet 6 inches draught, and about 100 tons displace—

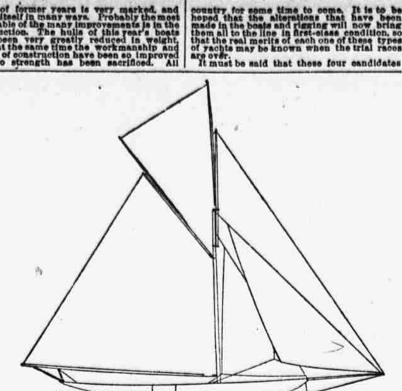


ment. She is the meat radical departure of all Her most marked features are small displacement and excessively low lead. Her lines are extremely fine. The water lines and buttocks are fine, both forward and aft. The midship section is widest at the deck. From here it takes an easy sweep to the fin. She has an easy bigo and sonsiderable dead rise. The sections forward are somewhat of a V form, and aft are much steeper than the other boats. At the bettom of the fin is boited some eighteen tons of lead. The proportion of lead is small compared with the displacement. A very marked feature of the boat is the extremelength of bow. The fin mast, &c. are in consequence very far aft. The rig is the smallest of all, the volunteer's. The rigging is nent and strong. The weak part, if any, is in the spars.

This boat has lately undergone considerable alterations, five tons of lead having been added to the bulb and an increase in sail made at the same time.

The following rough sketch is intended

those of former years is very marked, and shows itself in many ways. Probably the most noticeable of the many improvements is in the construction. The bulls of this year's boats have been very greatly reduced in weight, while at the same time the workmanship and details of construction have been so improved that no strength has been sacrificed. All



JUBILEE.

amall details like deck fittings, blocks, running and standing rigging, have been greatly improved and lightened. The wire used at present is of enormous tensile strength, ranging from 200,000 to 250,000 pounds per square inch. The details of the rigging have shown a wonderful advance, and in this respect we are at present far ahead of England, they having shown little or no improvement in that direction during the past five or six years. The most noticeable improvement is seen in the use of masthead shrouds, as they, when properly set up. keep the mast raid as a saight, and prevent the wringing the past of the property and the property and the property of the masthead ironwork has undergone considerable change. It is safe to say that the weight of ironwork crosstrees, trustletrees, &c., on Jublies' mast is little more than half that on the Volunteer, while maintaining equal strength.

A very noticeable feature of the boats of '83, compared with those of former years, is the very marked increase in sail area that has been given. The Volunteer carried a large rig, with a main boom 84 feet long. The Jublies' boom in the cet. or of feet longer, while Vigitant's and feet. This great on increase of the schame of the standard response of the smaller tons. It has been a very noticeable fact that the boats in the larger classes were devoid of that life and snap that the smaller ones had. The forty-six-footers, with their big rige, would time and again walk away from older craft fifteen to twenty feet longer, when the lengths of the larger boats should certainly tell in their favor. The increased speed that was expected from the general increase in sail has undoubtedly been realized, especially in light winds. In strong winds it is a question this regard if new boats are botting. Masta architecture is undoubtedly a very elastic action you are apt to lose in another.

The features aimed at in the four boats are as follows: In Colonia, the Intention seemed to be to produce high scene for the masta will, but apparently fal

placement, and small wetted surface. The eary bigs of the other boats is absent, her designer evidently preferring the extra stability that a strong bigs gives. He has at the same time kept down the extreme beam and saved the top weight. The ends of the boat look extremely well. The ends of the boat look extremely well. The hull is undoubtedly well adapted for windward work, and at times she shows up much the best of the fleet, her bad sails notwithstanding. Her weak point is on a reach and run, the faint bigs of the other boats apparently allowing them to slip along more easily. In Piligrim, the object was to attain the results in the large class that the small fines had shown, the principal feature being very small displacement compared with the sail area and with her length. To attain this a great draught was necessary, and consequently very great wetted surface. To those who were familiar with the resistance due to aurface little was expected of her in light winds, as, while the ratio of sail to surface is very much smaller than the other hoats. Frictional surface is the principal resistance at low speeds. The change that has just been made in her is in the right direction, and we may expect to see better results.

In the table below will be found the official load water line lengths, ratings, sail areas, and spar dimensions of the four boats:

Rac Sail Mass Mass Mass Mass Mass Mass Area

7,800 aquare feet.	8,500 square feet.	8,500 aquare feet.	8,500 square feet.	a of lower sails, approximately
86.28	***************************************	85.48	90.54	E. I.
75.12		76.27	75.00	at to jib topsail stay.
73.14		74.02	74.86	st to jib stay
111.58		122.73	122.88	pendicu ar for measurements
74.13		75.00	74.62	nnaker boom.
28,00	***************************************	33,00	33.00	rsprit outboard
54.55	***************************************	55.22	54.76	
103.84		100.15	100.00	n beom
47.08		88792	PH.88)DA\$
65.70 feet		68 00 feet.	98.00 feet.	st drek to bounds
10,261 square feet.	-	11,312 square feet. 11,340 square feet. 11,342 square feet.	11,312 square feet.	***************************************
98.31 feet		94 39 feet.	96,35 feet.	oing length
Pilgrin.	Jubiles	Colonia.	Figilant.	Mean energy

The best work the small fins have done has been in heavy weather; the stronger the wind and the rougher the sea the better they go. Now, the weather that would be rough for the small boat would be very mild for the large craft. It is to be hoped that one of the trial races will be sailed in a heavy blow, so that the best qualities of the fins may be brought out. These boats have been considered by many as mere racing machines. This is undoubtedly so in regard to the Piligrim, as her draught makes her impracticable for yachting purposes. The Jubiles on the other hand, is a very comfortable boat for cruising. Her draught is not excessive and she handles perfectly.

The leasons to be learned from the trial will be of very great value and will influence in a great measure the yacht designing in this

for cup-defending honors approach their of-ficial trials after very unsatisfactory prelim-inary work. Boats being equal, the Valkyrie should win to a certainty after her prolonged and decisive season on the other side. She is to-day a seasoned campaigner, while they are still comparative novices. The cruise of the New York Yacht Club and the incidental races have furnished the only data we have for com-parisons, and when that is scanned we see how meagre the information is. Such as it is, the table showing records of the boats up to to-day is as follows:

Jaminodore's Cup, Glen Core Sun, New London to Newport. Joelet Cup Support to Vineyard Haven sator Cup	Pigilant Disabled. 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Pigifant Judite. Disabled 3 1 3 8 3 8 8 1 3 2 Withdrawn Withdrawn	Oslenia 1 1 1 3 Withdrawn	Pogria Withdrawn.	Prigries. Strong Northwest. Light Southwest. Very light Southeast. Light South to North Presh Southeast. Up the Mast.
P	-	u	co	1	Fresh Southeast.
utor Cup	7lthdrawn,	Withdrawn	Withdrawn.	1	Up the Mast.
Lator Cup	-	1		u	Moderate South.
RACING RECORD. Virtiant Fight starts: 5 does I accord I deshied 1 did not finish.	a I seemd	RACING RECORD.	COED,		
Jubiles—Six starts; 4 seconds, 1 thftd, 1 did not finish. Colonia—Six starts; 2 firsts, 8 thirds, 1 did not finish.	thirds 1	did not fin	F		

READY FOR THE TEST TO-DAY.

All of the Cup Defenders Reported to Have Been Greatly Improved. To-day's event is the first of a series of three

or four races which will be held during the next few days, and are known as the trial These races are held so that the America's Cup Committee of the New York Yacht Club can study the merits of the various boats, and

while the committee can select any one, irrespective of what its record may be, it is safe to say that the yacht which wins the greatest number of races or does the best work under varying conditions during the next few days will be selected to defend the cup. Beyond the measurements of the cup de-fenders, which appear in another column.

and the fact that Gen. Paine has finally de-cided to sail on the Jubilee, there was little new to be learned about the boats yesterday. Work on the Colonia was finished Tuesday

afternoon, and shortly after 5 o'clock yesterday morning she was lowered in the water and, under tow of a tug, was taken to the Erie Basin, where she was measured by John Hyslop, the official measurer of the New York Yacht Club.

Yacht Club.

As soon as he had finished his work the yacht was taken to Bay Ridge. Hag sail was hoisted, and under mainsail, staysall, jib. and working topsail, the Herreshoff keel boat indiged in a little preliminary spin to see how her sails set.

Both Capt. Haff and Mr. Rogers were apparently well pleased with the way she acquitted herself in the light air, but think that if they had been able to make the alterations to her keel in a proper manner she would be minutes faster.

After a short trip past the Narrows the Colonia came slowly back to Bay Ridge and dropped anchor quite a distance off shore and in front of the Atlantic Yacht Club house.

Mr. Rogers came ashore and after going to the New York Yacht Club house for his mail, returned to the boat at 10 clock last night.

The Jubilee, which had been lying alongside of the Colonia for the past few days, stayed on the dock and waited for the afternoon tide, so as to give her coat of pot lead a chance to harden.

A great crowd had gathered when the yacht was lowered into the water at 3:15 o'clock yesterday afternoon, and the general opinion now seems to be that she is the dark horse in the race.

Neither Gen. Paine nor his son was on hand

terday afternoon, and the general opinion now seems to be that she is the dark horse in the race.

Neither Gen. Paine nor his son was on hand when she left the dock, but Capt. Barr was, and he appeared to be very well pleased with her appearance. A friendly tug towed the Jubilee down to Bay Ridge, where she dropped anchor just outside of the Colonia.

The Vigilant, which had been expected all afternoon, joined her sister racers shortly after the Jubilee anchored. The Tobin bronze boat was towed from City laind.

C. Oliver iselin, who has had charge of her in all her races, was on board, and while he declined to discuss the chances of the boat, he seemed to be quite confident of success.

The Boston fin Pilgrim, which left that port yesterday afternoon, was reported to be off staten Island at a late hour last night. Measurer Hysiop considers her to be a greatly improved boat.

He said that in spite of all the talk about her being a failure he thought she would beat any of them in a blow. While he did not think she would stand much chance in light air, he considered her to be very fast.

The four defenders are surrounded by rather an extensive fleet of yachts, and in spite of the lateness of the season it is safe to say at least sixty of the larger boats will accompany the racers out to the starting line this morning.

MARINE INTELLIGENCE.

MINIATURE ALMANAC THIS DAY. Sun rises..., 5 33 | Sun sets..., 6 23 | Moon rises. 2 18 aics water—full par. Sandy Hook, 4 48 | Gov. Island, 5 11 | Hell Gate., 7 00 Arrived-WEDNESDAY, Sept. 6.

AFFIVE AWARDAM, SOPI. C.

B. Majestic, Parsell, Liverpool.

B. Bermuda, McKenze, Philadelphia,

B. Nexico, Altonare, Colen.

B. Yumuri, Hansen, Vera Urez,

B. Argonaut, McUllierray, Montege Bay,

B. Parsnes, Thomas, Corea,

B. Ozama, Chichester, Azua,

B. Kong Frods, Pedersen, Bagua,

S. City of Columbia, Jenney, Norfolk,

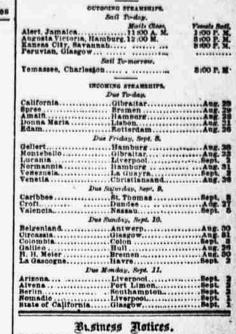
B. Goldaboro, Fennington, Philadelphia,

ifor later arrivals see First Pars. [For later arrivals see First Page.]

ARRIVED OUT. Sa New York, from New York, at Southampton. SIGHTED.

Se Stratheak, from New York for Yokohama, passed Gibraliar.
He Amsterdam, from New York for Rotterdam, passed the Isle of Wight.

Sa Jersey City, from New York for Bristol, nock, from Boston for how York s, from Baltimore, for New York



Robert El-more has provoked a deal of a d verse criticism, but its readers all agree that the best cure for cough a and colds is Adamson's Betanic Cough Balsam. Trial bottles, 10 cents. Large bettles, 85 cents,

MARRIED.

PROWARD-LEGG.—At Crestlawn, Tarrytown N Y., Sept. 6, 1893, by the Rev. Charles H. Eaton, D., D., Annie Marte, daughter of George Lagg, Eeq. to Arthur Platt Loward of New York.

DIED.

BERRYMAN,-Very suddenly, at Newport, R. L.

on Tureday, Sept. 5, Charles H. Berryman. Funeral services on Friday, Sept. 8, at 10:45 A. M., at Trinity Church, Broadway and Wall at, A BROLL.—On Sept. 6, 1893, Elizabeth Carroll, widow of Officer Franklin Carroll of the 25th pre-

cinct. 5
Funeral from her late residence, 449 East 80th st.

on Friday at 2 P. M.

DUFF.—Sept, 6, at the residence of his father-in-law,
Henry H. Rogers, at Fairhaven, Mass., Bradford
Ferris Duff, only surviving child of William H. and Grace Shaw Duff, in the 25th year of his age.

Grace Shaw Duff, in the 20th year of his age.

Notice of funeral bereafter.

FOGA RTY.—Mary Ann Fogarty, aged 48 years.

Her relatives and friends are invited to attend the funeral, from her late residence, 407 West 26th st., on Friday, Sept. 8, at half past 1 o'clock, Interment in Calvary Countery.

HOLLAND.—At Yonkers, 6th inst., John Francis, beloved in rean and John And Nellis Helland.

BOLLAND.—At Yonkers, 6th inst., John Francis, beloved infant son of John T. and Nellie Belland.
Funeral Friday, Sept. 8, at 2 P. M.
LA WHEN'S E.—Suddenly, on Sept. 5, 1885, at Fisher's Island, N. Y., Marie ...ouise, wife of John F.
Lawrence, and eldest daughter of the late Adolf Rodewald.
Notice of funeral in Friday's papers,
MORG A.N.—On Wednesday, Sept. 6, Janet Stewary wife of James Morgan, in her 63d year.

Puneral services on Friday evening. Sept. 8, at 7 o'clock, at her late residence, 225 9th st., South Brooklyn. Interment at the convenience of the family.

MO - MO- MI. - On Tuesday. Sept. 5, 1893, Kate Moskoski, beloved wife of Philip Moskeski, in her 334

Funeral services on Thursday at 1 P. M. from her

Funeral services on Thursday at 1 P. M. from her residence, 448 West 51st st.

MULLEN.—On Sept. 6, at the residence of her sister, Mrs. John Kelly, Saratoga Springs, N. T., Mary, daughter of the late Edward and Anna McClosky Mullen, and niece of the late Cardinal McClosky.

Services Friday, at St. Peter's Church, Saratoga Springs. Interment in family vault St. Patrick's Church, old Cathedral, on Friday, at S P. M.

NGLAN.—Suddenly, on Sept. 5, Francis, beloved husband of Margaret Noian, in his 58th year.

Relatives and friends are invited to stiend the services at the Church of St. Viscont do Fani, Morth 6th st., Brooklyn, on Thursday morning, as 10 o'clock.

o'clock.

OG DEN.—At Bernardsville, N. J., on Teachay ovening, Sept. S. Jonathan Ogden of Brooklyn, in the
S4th year of his age.

Funeral services at the residence of his son, 73

Pierrepont st., Brooklyn, Friday aftersoon, Sept. S
at 8 o'clock.

PEM B ECOK.—suddenly, on Tuesday, Sept. S, as

Elisabeth, N. J., William A. Pembrook, in the Coth
year of his age.

year of his age.
Funeral at 2 o'clock Thursday, Sept. 7, from his late residence, 308 West Jersey st., Bilzabeth. Frain leaves on N. J. C. R. R., foot of Liberty st., at 1 o'clock. Carriages will be in waiting at Elizabeth

station, Kindly omit flowers. READY,—At Brooklyn, on Sept. 6, 1895, the se of James Ready, 5 years of age. Funeral from residence of his parents, Hemiock et.

near Danforth st., on Thursday at 3 P. M. Interment at Albany. Albany papers please copy.

VAN PELT.—On Monday, Sept. 4. at the residence of her parents, 165 Monticello av., Lavins daughter of Weelay and Elizabeth Van Pelt, aged

Relatives and friends are invited to attend the funeral at the Emory M. H. Church, Belmont and Bergen ava., Jersey City Heights, on Thursday, Sept. 7, at 2 P. M.

Special Motices.

TO NEG LEUT the hair is to lose youth and some liness. Save it with PARKER'S HAIR BALSAK. HINDERCORNS, the best cure for corps. 16 cents. TO RENT OR LEASE,
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DAVID BALFOUR, Being Memoirs of His Adventures at Home and Abroad. 12mo. \$1.50.

Mr. Stevenson's new book is a sequel, and a worthy one, to " Kidnapped." In reviewing that book, the Nation said: "Mr. Stevenson has never appeared to greater advantage than in 'Kidnapped.' . . . No better book of its kind than these Adventures of David Balfour has ever been written. Mr. Stevenson confesses in a note his own great kindness for Alan and Davie, and half promises to tell what further befell them after their parting in Edinburgh -- a promise which the friends they have already made long to see fulfilled." This promise is fulfilled in "David Baltour," which is more than a story of romantic adventure, for it makes David the hero of a love affair, the description of which reveals the author's genius in an altogether new light, and supplies fresh evidence of his wonderful power of spirited narrative and bold character painting.

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